

Presentation  
to the

# Civil Works Review Board

San Clemente Shoreline, Orange County, California  
Coastal Storm Damage Reduction

Feasibility Report and  
Environmental Impact Statement

by

**COL R. Mark Toy, P.E.**

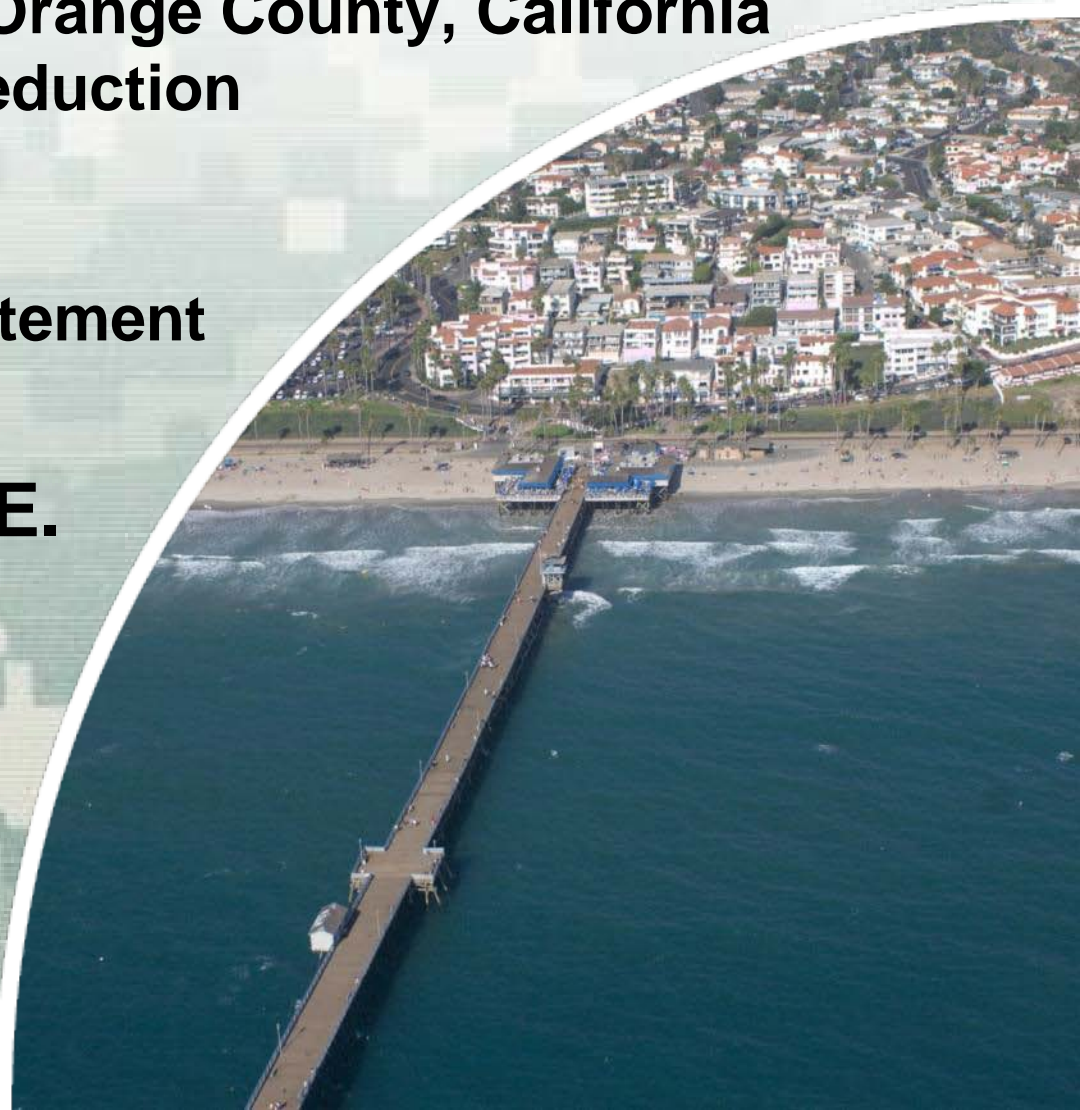
Commander

Los Angeles District

12 May 2011



US Army Corps of Engineers  
**BUILDING STRONG**<sup>®</sup>  
*And Taking Care Of People!*



## #1 MISSION:

# PROJECT AND PROGRAM EXECUTION



“People are the foundation for everything we do.

If we provide the proper training and facilities for them to be successful, then people will accomplish our #1 mission: project and program execution. In Los Angeles, we are *Building Strong and Taking Care of People.*”

COL Mark Toy, on our renewed command focus

# Purpose of CWRB Briefing

- ✓ **Provide overview of the San Clemente Shoreline Feasibility Study and EIS**
- ✓ **Answer questions and address comments**
- ✓ **Obtain CWRB approval to release the final report for State and Agency Review and to complete the Chief of Engineer's Report**





# District Presentation Agenda

## ❖ Overview of Feasibility Study and Recommended Plan

- Study Area
- Study Background and Authority
- Problems and Opportunities
- Plan Formulation
- Recommended Plan

## ❖ Study Reviews

## ❖ Questions



# Key Study Partners

## City of San Clemente, CA (Sponsor)

- Lori Donchak, Mayor
- City Council Members
  - Jim Evert
  - Jim Dahl
  - Robert Baker
  - Tim Brown
- George Scarborough  
City Manager
- Tom Bonigut  
Assistant City Engineer



## State of California, Dept. of Boating & Waterways

- Kim Sterrett, Project Manager



# Project Delivery Team Members

## District

Margie Aguilar	Financial Manager
Jeffrey Devine	Geotechnical Engineer
Juan Dominguez	Cost Engineer
Steven Gale	Asset Management
Joseph Johnson	Project Manager
Joseph Lamb	Economist
Glen Matlock	Cost Engineer
Chuck Mesa	Coastal Engineer
Son Nguyen	Scheduler
Thomas Keeney	Biologist and Env Coordinator
Heather Schlosser	Lead Planner
Mark Weintraub	Office of Counsel
Nathaniel West	Planner
Noel Davis	Consultant – Environmental
Michael Gorecki	Consultant – Economics
Lisa Louie	Consultant – Environmental

## Resource Agencies

NOAA Fisheries  
US Fish & Wildlife  
EPA  
CA Department of Fish & Game  
CA Coastal Commission

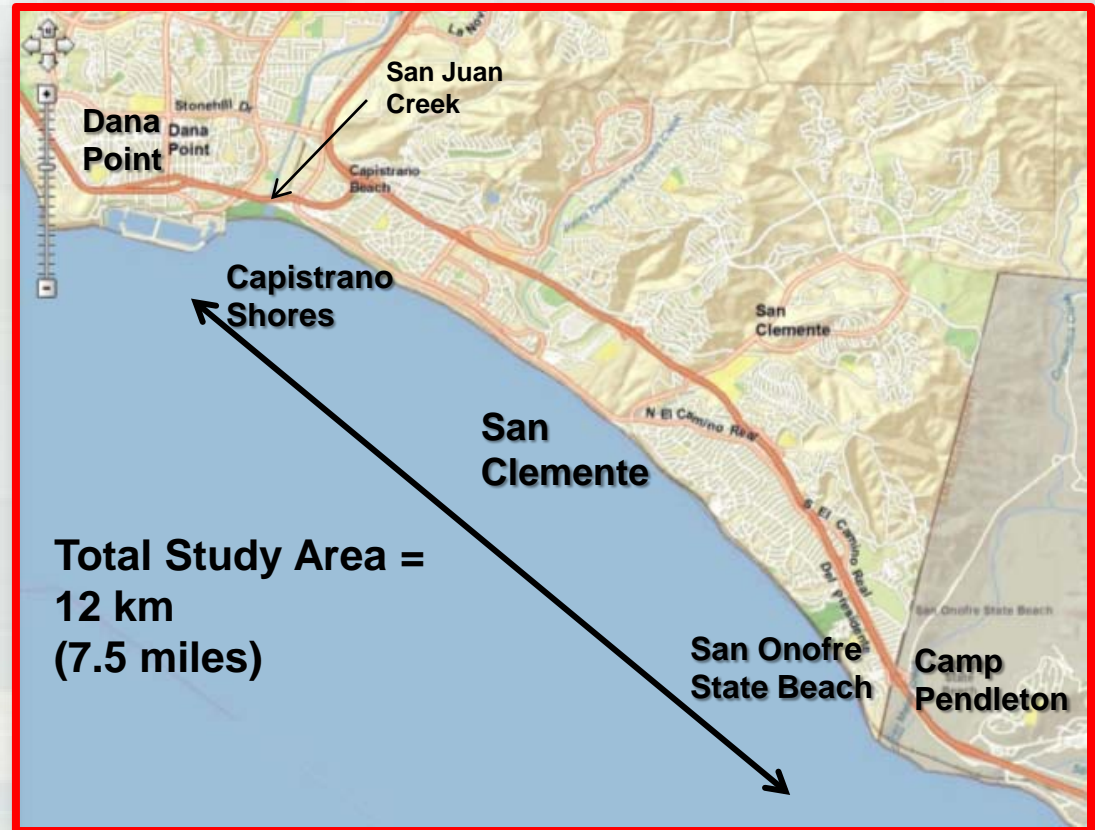
## ATR Team

Eric Jolliffe	Environmental
Susan Miller	Real Estate
James Neubauer	Cost Engineering
Thomas Pfeifer	Plan Formulation
Arden Sansom	Economics
James Snyder	Geotech
John Winkelman	Lead and Coastal Eng

## Vertical Team

Ada Benavides	Deputy Chief, RIT
Ken Zwickl	HQ RIT
Michael Haskins	HQ OWPR
Aaron Hostyk	HQ Counsel
Jeremy LaDart	HQ OWPR
Jeff Trulick	HQ OWPR
Andrea Walker	HQ OWPR
Charles Ware	HQ OWPR
Charles Chesnutt	IWR
Paul Bowers	SPD DST
Clark Frentzen	SPD DST
Kurt Keilman	SPD DST
Deanie Kennedy	SPD DST
Ching-Han Ko	SPD Counsel
Annette Kuz	SPD Counsel
Leigh Skaggs	SPD DST

# State Map and Project Location



# Study Authority

## **Flood Control Act of 1965, Section 208**

*“The Secretary of the Army is hereby authorized and directed to cause surveys for flood control and allied purposes, including channel and major drainage improvements, and floods aggravated by or due to wind or tidal effects, to be made under the direction of the Chief of Engineers, in drainage areas of the United States and its territorial possessions, which include the localities specifically named in this section. ... Coasts of Washington, Oregon, and California to determine advisability of protection work against storm and tidal waves.”*

## **Energy and Water Development Appropriations Act of 2000, PL 106-60, 29 SEP 1999**

*“The Committee recommendation includes funds for the Corps of Engineers to conduct a reconnaissance study investigating shoreline protection alternatives for San Clemente, California.”*





# Problem Statement

Along the shoreline of San Clemente, storm waves impinge directly upon the protective revetment and railroad ballast, significantly threatening the operation of the LOSSAN railroad line. This railroad corridor is a vital link for passenger and freight service and has been designated as a Strategic Rail Corridor by the Department of Defense.

The narrowing of the shoreline also subjects the public facilities, seaward of the railroad corridor, to wave-induced damages, and further reduces recreational space on an already space-limited area.



# Winter Conditions



April 2011



# Summer Conditions



August 19, 2010





# Existing Conditions





# Existing Conditions



Rail  
Line

Protective  
Berm

High Tide  
Line



# Planning Objectives

- ✓ Reduce Potential for Storm Damages to the Los Angeles to San Diego Rail Corridor
- ✓ Reduce Potential for Storm Damages to Facilities Located Along the Coast of San Clemente
- ✓ Maintain Recreation Use Along the Pacific Coast of the City of San Clemente





# Study Reaches



**Recommended  
Project =  
1,040 m  
(3,412 ft)**



# Future Without Project Assumptions

- Predict that the RR will construct a seawall when the shoreline is within the 1% chance of storm-induced erosion.





# Constraints and Considerations

## ***AVOID:***

- ✓ Impacts to Nearshore Ecosystem (rocky reef and surfgrass)
- ✓ Impacts on Surfing Opportunities
- ✓ Impacts to Special Status Listed Species
- ✓ Impacts on Water Quality and Air Quality
- ✓ Impacts on Cultural and Historic Features



## ***CONSIDER:***

- ✓ Construction will occur in winter months to avoid impacts to Special Status Listed Species



# Plan Formulation

## Initial Screening

### Non-structural Alternatives

- No Action Plan
- Managed retreat of structures and recreation uses
- Flood proofing structures
- Best Management Practices

### Structural Alternatives

- Revetment – new structures for un-armored reaches
- Seawalls – remove all revetments and build a seawall along all reaches
- Breakwater
  - Visible
  - Submerged
- Protective Berm
  - Conventional nourishment
  - With hard structures



# Plan Formulation

- *All Alternatives Screened Out Except Protective Berms*
- 11 Protective Berm Widths Modeled to Assess Storm Damage Reduction Benefits
  - 10, 15, 20, 25, 30, 35, 40, 45, 50, 55 & 60 meter widths



# Economic Analysis of Alternatives

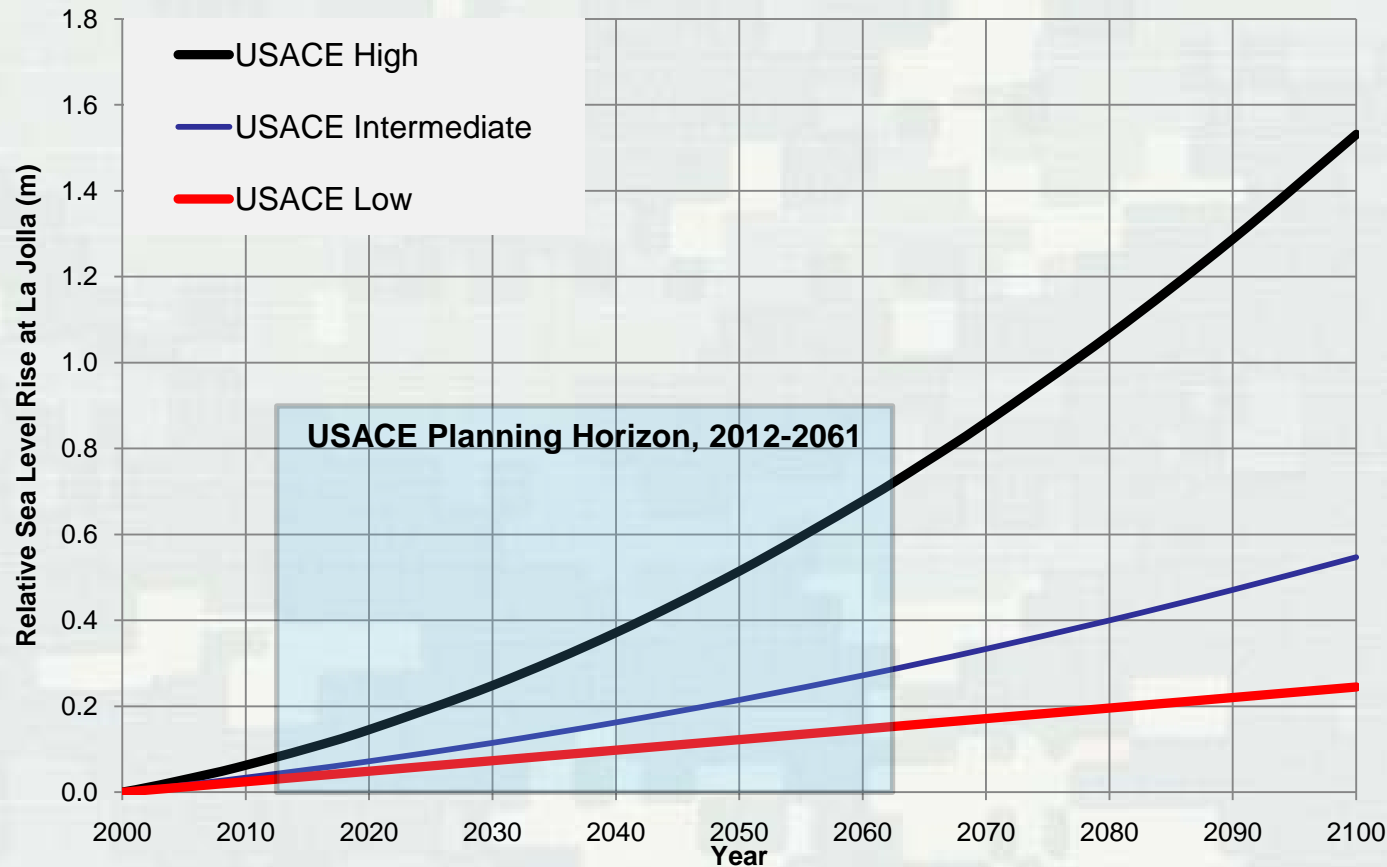
## Screening-Level Benefits

Protective Berm	Annual Net Benefits
10	\$1,270,933
15	\$1,299,188
20	\$1,186,282
25	\$1,164,764
30	\$1,139,242
35	\$1,108,935
40	\$1,074,687





# Projections for SLR Scenarios



- ❖ EC 1165-2-211 Guidance
- ❖ Low SLR (Existing): 0.12 m (0.4 ft) over 50 yrs
- ❖ High SLR (Curve III): 0.7 m (2.3 ft) over 50 yrs



# Study Recommendations



## Plan Features

- Construct a 15-meter (50-ft) wide Protective Berm
- Volume = 192,000 m<sup>3</sup> (251,000 cy)
- Alongshore Distance = 1,040 m (3,412 ft)
- 8 Renourishment Events
- Average Renourishment Interval = 6 years



# What Will the Project Look Like?



Looking South from  
the Marine Safety  
Bldg



# Borrow Site



Quantity Needed over 50 years =  $1.7 \text{ Mm}^3$  ( $2.3 \text{ Myd}^3$ )





# Monitoring and Mitigation Plan

- ❖ Rocky reef area in Project Area (T-Street reef) will be compared with a control reef outside of the Project Area (Mariposa Point)
- ❖ 2 years prior to initial construction and 2 years post initial construction
- ❖ Parameters
  - Surfgrass Density
  - Percent Cover of surfgrass, sand and rock
  - Sand Depth



# Environmental Considerations

- ❖ EPA Rating on Draft EIS
  - Amount of data collected/required
  - Mitigation endowment
  - Mitigation ratios
- ❖ Water Quality Certification
  - 404(b)(1) Analysis
- ❖ Final Coordination Act Report
  - Expected to receive in June 2011
- ❖ Federal Coastal Consistency Determination
  - Draft has been submitted to Coastal Commission
  - Hearing July 2011



# Physical Monitoring

- ❖ Beach Width Measurements – monthly surveys
- ❖ Topography and Bathymetry – twice a year
- ❖ Video Based Photogrammetry
  - Multiple video cameras used to map the sub-aerial portion of the shoreline



# Public Access Points



Linda Lane



Corto Lane



Parque Del Mar



T-Street



Cristobal Lane





# Residual Risk

**Without project annual damages  
\$1,420,000**

**With project annual damages  
\$35,500**

City of San Clemente will continue to implement:

- Current operations and maintenance
- Multi-Hazard Emergency Plan



# Economic Summary

Total Project Cost	\$96,000,000
Average Annual Costs	\$2,100,000
Average Annual Benefits	\$3,000,000
Storm Damage Reduction Benefits	\$1,400,000
Recreation Benefits (unlimited)	\$1,600,000
Net Annual Benefits	\$900,000
Benefit-Cost Ratio <sup>1</sup>	1.4

<sup>1</sup>January 2011 Price Level, 4.125 Percent Discount Rate



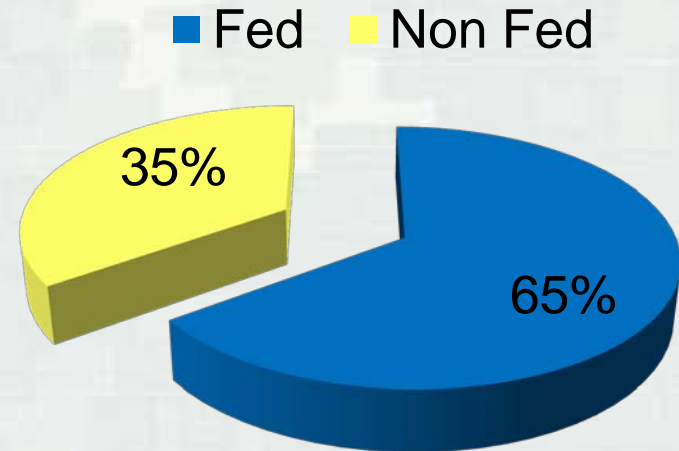
# Cost Sharing Responsibilities

## Total Initial Project Cost

**\$11.1 M (JAN 2011)**

Federal Share \$7.22 M

Non-Federal \$3.88 M

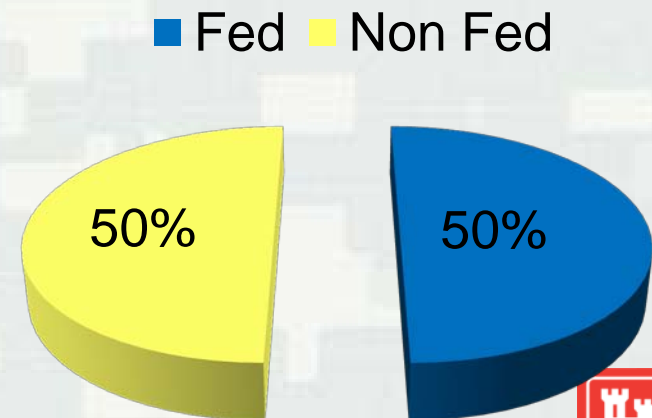


## Renourishment Costs

**\$84.9 M (JAN 2011)**

Federal Share \$42.5 M

Non-Federal \$42.5 M



**OMRR&R - No significant incremental cost**





# Regional Integration

- ❖ Impacts of the Recommended Plan on surrounding communities, infrastructure, and environmental resources are considered.
- ❖ Surrounding watershed activities incorporated in sediment budget.
- ❖ Coordination with the Orange County Transportation Authority (OCTA) to reduce the risk of damage to the LOSSAN Railroad.



# USACE Campaign Plan

## GOAL 2: ENGINEERING SUSTAINABLE WATER RESOURCES SOLUTIONS

*Deliver enduring and essential water resources solutions through collaboration with partners and stakeholders.*

- ✓ Assurance of engineering, economic, and environmental sustainability of project over 50-year economic life
- ✓ Recommended Plan peer reviewed and supported by Sponsor and Resource Agencies
- ✓ Adaptive management measures incorporated to account for potential adverse environmental/cultural impacts



# Environmental Operating Principles

## ***Strive to Achieve Environmental Sustainability***

- Monitoring plan minimizes environmental impacts through adaptive management

## ***Recognize Impacts on the Physical Environment***

- Construction outside seasonal habitat windows
- Avoid and minimize impacts on environmental resources/habitats

## ***Seek Balance and Synergy Among the Project and Environment***

- Recommended Plan supported by Sponsor and Resource Agencies

## ***Accept Responsibility and Accountability***

- NEPA, FWCA, and ESA requirements met

## ***Mitigate Cumulative Impacts on the Environment***

- Minimize impacts on surrounding habitats through adaptive management

## ***Provide Greater Understanding of Environmental Impacts***

- Communicate impacts to stakeholders and the public

## ***Respect Views of Others Interested in the Project***

- Actively listen/respond to and incorporate public concerns





# REVIEWS



# Reviews Conducted

- ❖ National Planning Center for Coastal Storm Damage Reduction (PCX-CSDR) led the ATR and IEPR
- ❖ HQ Policy Review
  - ✓ FSM, AFB and Draft Report
- ❖ Public Review
  - ✓ Draft Report
- ❖ Cost Certification
- ❖ Model Approval



# Agency Technical Review

- ❖ ATR led by John Winkelman (PCX, NAE)
- ❖ 4 ATR Reviews
  - ✓ Draft AFB Report – Aug – Sep 2009
  - ✓ Revised Draft AFB Report – Dec 2009 – Jan 2010
  - ✓ Draft Report – April – May 2010
  - ✓ Final Report – Dec 2010 – Mar 2011
- ❖ Received 617 comments
  - ✓ Impacts of the project on the system, hard bottom habitat, and surfing
  - ✓ Criteria governing the trigger point for construction of a seawall by SCRRA
  - ✓ Inclusion of risk based model output distributions
  - ✓ Inconsistencies between the various parts of the report package
- ❖ All Comments Resolved





# Independent External Peer Review

- ❖ IEPR conducted May-Sep 2010
- ❖ 24 comments received - 8 High Significance
  - ✓ Data does not show chronic long-term shoreline erosion
  - ✓ Regional data used to predict project performance
  - ✓ Variability of material in the borrow site
  - ✓ Risk-based cost analysis not completed
  - ✓ Adequate approach needed to determine significance of potential impacts on surfgrass
- ❖ All Comments Addressed



# HQ Policy Review

- ❖ Policy Reviews conducted for the Feasibility Scoping Meeting (FSM), Alternative Formulation Briefing (AFB), and Draft Reports
- ❖ Highlights
  - ✓ Further clarification of screening process
  - ✓ Need for a Monitoring and Mitigation Plan



# Public Review

- ❖ Posted in Federal Register on August 9, 2010
- ❖ Public Meeting held August 19, 2010 in San Clemente
- ❖ ~100 comments received from various organizations, federal/state agencies, and the public
  - ✓ Concerns with engineering assumptions and analyses
  - ✓ Adequate approach needed to determine significance of potential impacts on surfgrass
  - ✓ Acceptable Mitigation Plan needed



# Cost Estimate Certification

- ❖ Cost Estimate Review and Certification
  - Conducted Risk-Based Schedule and Cost Analysis per ER 1110-2-1302
  - Contingency increase (18% to 36%)
  - Cost Certified February 9, 2011





# Planning Model Approval

- ❖ Combined Engineering/Economic Model
- ❖ Technical Review by PCX-CSDR in 2005
- ❖ HQ “approved for use” in this study on January 31, 2011
- ❖ USACE-approved model (Beach-*fx*) not applicable for study area



# SPL Recommendation

The Civil Works Review Board  
approve release of the Feasibility  
Report and EIS for State and Agency  
Review





Jim Dahl, Councilmember  
George Scarborough, City Manager

# **USACE CIVIL WORKS REVIEW BOARD**

## **MAY 12, 2011**

# City of San Clemente



A Southern California Coastal City





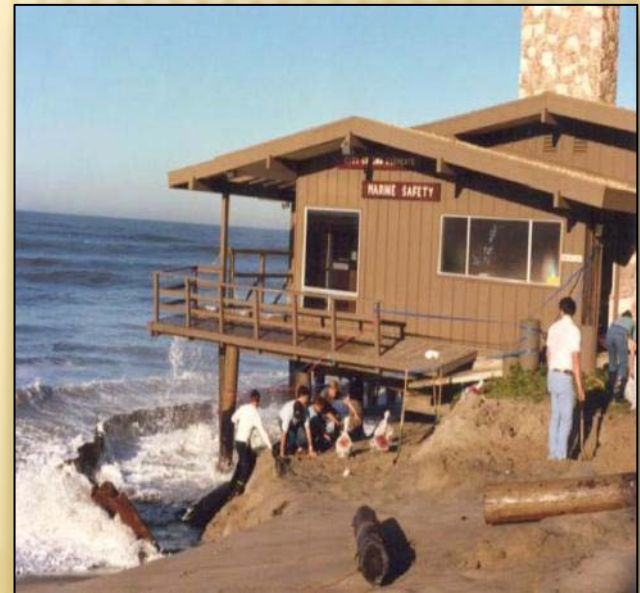
# San Clemente Beaches



**2.6 million annual  
beach visitors**

# Need

- Protect Railroad
- Protect Infrastructure
- Preserve Tourism/Economic Engine





# Protect Railroad



# Protect Infrastructure



**Replacement value of City facilities is \$13.5 million**





# Preserve Tourism/Economic Engine



# Support Economy

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- **Maintaining Transportation Corridor**
- **Maintaining Economic Value of Shoreline**  
**(\$37M/yr)**
- **Maintaining Regional Economic Output**  
**(\$132M/yr)**





# Recommended Plan

- ❖ City supports the 15-meter Recommended Plan
  - Maintain Healthy Shoreline
  - Protects Railroad
  - Minimize Environmental Impacts
  - Community Acceptability



# Thank you for your consideration!



Jim Dahl, Councilmember  
George Scarborough, City Manager





# SAN CLEMENTE SHORELINE, ORANGE COUNTY, CALIFORNIA, COASTAL STORM DAMAGE REDUCTION

## PRESENTATION TO THE CIVIL WORKS REVIEW BOARD

Christine T. Altendorf, PhD., P.E.  
South Pacific Division  
U.S. Army Corps of Engineers  
12 May 2011



US Army Corps of Engineers  
**BUILDING STRONG®**



**CORNERSTONE OF THE SOUTHWEST!**

# Briefing Objectives

- **Rationale for Support**
- **Quality Assurance Activities**
- **Expected Response to the Draft Report of Chief of Engineers**
- **Policy Issues**



# **BLUF: Why SPD Supports this Project**

- **Embraces *holistic* perspective - strikes best balance among outputs, effects, interests**
  - **Federal interest**
    - ✓ ***Greatly* reduces coastal storm damages (NED plan)**
    - ✓ **Helps protect Nation's critical transportation infrastructure (LOSSAN railroad) – in environmentally sustainable manner**
  - **Stakeholders' interests**
    - ✓ **Nourishment provides substantial recreation benefits – important to local quality of life (NED, RED and OSE)**
  - **Environmental interests**
    - ✓ **Nourishment preferred to other viable alternatives**
    - ✓ **Designed to avoid & minimize potential nearshore effects (EQ)**





# Rationale for SPD Support

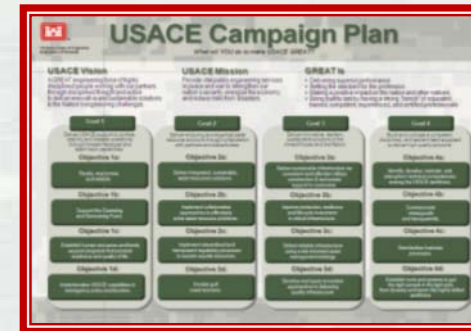
- **Report complies with all applicable policy & laws**
- **Recommended plan is technically sound, economically feasible and environmentally acceptable**





# Rationale for SPD Support USACE Campaign Plan

- **Objective 2a: Deliver Integrated and Sustainable Water Resource Solutions (SPD IPLAN Action 4)**
  - Plan provides significant positive Coastal Storm Damage Reduction and Recreation outputs
  - Plan designed to avoid adverse impacts to near shore resources
- **Objective 2b: Collaborative Approaches (SPD IPLAN Action 5)**
  - Recommended Plan peer reviewed and supported by Sponsor and Resource Agencies
  - Quarterly coordination meetings with CA Dept Fish & Game, NMFS, USFWS since May 2009
- **Objective 4b: Communicate Strategically and Transparently (SPD IPLAN Action 10)**
  - Vertical Team communication re: study status
  - Ongoing development of regional communication & technical approaches for nearby coastal projects (Carpinteria, Solana-Encinitas)



# **Legal and Policy Compliance Certification**

- **Technical and Policy Compliance: ATR of total project cost baseline by NWW Cost- Engineering DX; cost certified 9 February 2011**
- **ATR compliance review of Decision Document led by NAE and Coastal PCX; completed 5 April 2011**
- **All ATR comments have been resolved**
- **Editorial clarifications to address policy issues are being finalized**
- **Legal certification of the Feasibility Study & EIS/R Report by SPL and SPD Counsel completed**
- **IEPR conducted and comments addressed**
- **Type II IEPR will be performed during PED**
- **PED Review Plan submitted to SPD is under review**



# **SPD Quality Assurance Activities**

- Continuous involvement throughout development of the Feasibility Report**
- Facilitated issue resolution and dialog among the vertical and horizontal team throughout the study process**
- Review of Policy Guidance Memo: all significant issues adequately addressed**
- Division Engineer's Transmittal Letter signed 8 April 2011**



# **Expected Response from S&A Review of Draft Report of the Chief of Engineers**

- **Expectations are a favorable response to the draft Chief's Report**
- **Recommendation supported by Non-Federal partners**
- **Robust collaboration with resource agencies and stakeholders throughout study process**
- **Issues have been addressed (mitigation, EPA, Water Quality) and team is prepared to respond to potential comments from State and Agency Review**





# SPD Recommendation

- **Release Draft Report of the Chief of Engineers for State and Agency Review**
  - **Final Report and EIS/R**
- **Continue coordination with Resource Agencies**
- **Approve Final Report**
- **Complete Chief's Report**



# HQUSACE POLICY REVIEW CONCERNS

## Civil Works Review Board

### **San Clemente Shoreline** **California** **Coastal Storm Damage Reduction Project**

Andrea Walker  
Office of Water Project Review  
Planning and Policy Division  
Washington, DC – 12 May 2011



# HQUSACE Team Reviews:

- AFB was held in March 2010
- Draft report review (concurrent with public) September 2010
- Final Feasibility Report /EIS: current review being completed by HQUSACE team



# Policy Issues from AFB & Draft Report Reviews

- ❑ Study/Project Authority
- ❑ **Problem Identification**
- ❑ Screening of Alternatives
- ❑ Future Without Project Conditions
- ❑ Number of Beach Fills
- ❑ **Parking/Public Access**
- ❑ Recreation Analysis
- ❑ Value Engineering
- ❑ **NED Benefits for Federal Participation**
- ❑ Environmental Compliance
- ❑ Air Quality
- ❑ Model Methodology for Storm Selection
- ❑ Real Estate Plan
- ❑ Construction Methodology
- ❑ **Monitoring & Mitigation Plan**
- ❑ **Operation, Maintenance, Repair, Rehabilitation and Replacement of the Project**
- ❑ Total Project Cost & Summary
- ❑ Cost Engineering
- ❑ Price Levels
- ❑ Peer Review & Safety Assurance Review
- ❑ Model Approval





# Significant Areas of Policy Concern:

- Problem Identification
- Public Parking & Access
- NED Benefits for Federal Participation
- Monitoring & Mitigation Plan
- Operation, Maintenance, Repair, Rehabilitation & Replacement of the Project



# Problem Identification

- **CONCERN:** AFB documentation did not clearly identify the cause of storm damages to warrant Federal participation. *This was also a concern raised by the IEPR panel.*
- **REASON:** A cogent explanation is needed to support estimate of storm related damages.
- **RESOLUTION:** Expanded problem statement added to report.
- **RESOLUTION IMPACT:** Concern Resolved.



# Public Parking & Access

- **CONCERN:** AFB documentation did not demonstrate if sufficient parking is/will be available to support peak hour recreation demand, per ER 1165-2-130.
- **REASON:** Sufficient parking and public access is required for Federal participation.
- **RESOLUTION:** Analysis of existing and FWP recreation analysis added to Economic Appendix. Adequate parking is available within a reasonable distance (1/4 mile).
- **RESOLUTION IMPACT:** Pending report revisions, concern resolved.



# NED Benefits for Federal Participation

- **CONCERN:** Federal participation must be justified primarily on storm damage reduction benefits, or in combination with incidental recreation benefits.
- **REASON:** Recreation benefits useable for justification may not be more than 50% of the total required for justification. If the criterion for justification is met, then all recreation benefits are included in the BCR.
- **RESOLUTION:** Analysis included in report.

	Benefit to Cost Ratio
Coastal Storm Damage Reduction Only	0.7
CSDR with Limited Recreation	1.3
CSDR with Unlimited Recreation	1.4

- **RESOLUTION IMPACT:** Concern Resolved.





# Monitoring & Mitigation Plan

- **CONCERN:** The AFB documentation lacked specificity regarding potential adverse impacts to sensitive resources/habitats which would result in the need for monitoring and/or mitigation.
- **REASON:** Monitoring & Mitigation Plan needed to comply with the Implementing Guidance for Section 2036 of WRDA 2007.
- **RESOLUTION:** Monitoring & Mitigation plan added to the draft report. Current plan for monitoring of project ecological impacts and mitigation for those, should they occur, is lacking a description of impact triggers, decision processes, performance standards and similar items.
- **RESOLUTION IMPACT:** Pending report revisions, concern resolved.



# Operation, Maintenance, Repair, Rehabilitation & Replacement of the Project

- **CONCERN:** The feasibility report does not clearly characterize the sponsor's responsibilities for OMRR&R for the project, which are currently estimated as \$0.
- **REASON:** While the Sponsor already performs many of the items that would be required as OMRR&R for the project, the report needs to clearly describe the sponsor's responsibilities and that performing these duties will likely result in no incremental increase from their current expenses.
- **RESOLUTION:** Expanded discussion to be added to report.
- **RESOLUTION IMPACT:** Pending report revisions, concern resolved.



# **HQUSACE POLICY COMPLIANCE REVIEW TEAM RECOMMENDATION**

**Contingent approval to release the draft Chief's Report  
– Feasibility Report and EIS for S&A Review.**

- Subject to document revisions reflecting current review of the Final Report.



# San Clemente Shoreline Feasibility Study Orange County, California

## *Civil Works Review Board*

### AGENCY TECHNICAL REVIEW (ATR)

Mr. John Winkelman

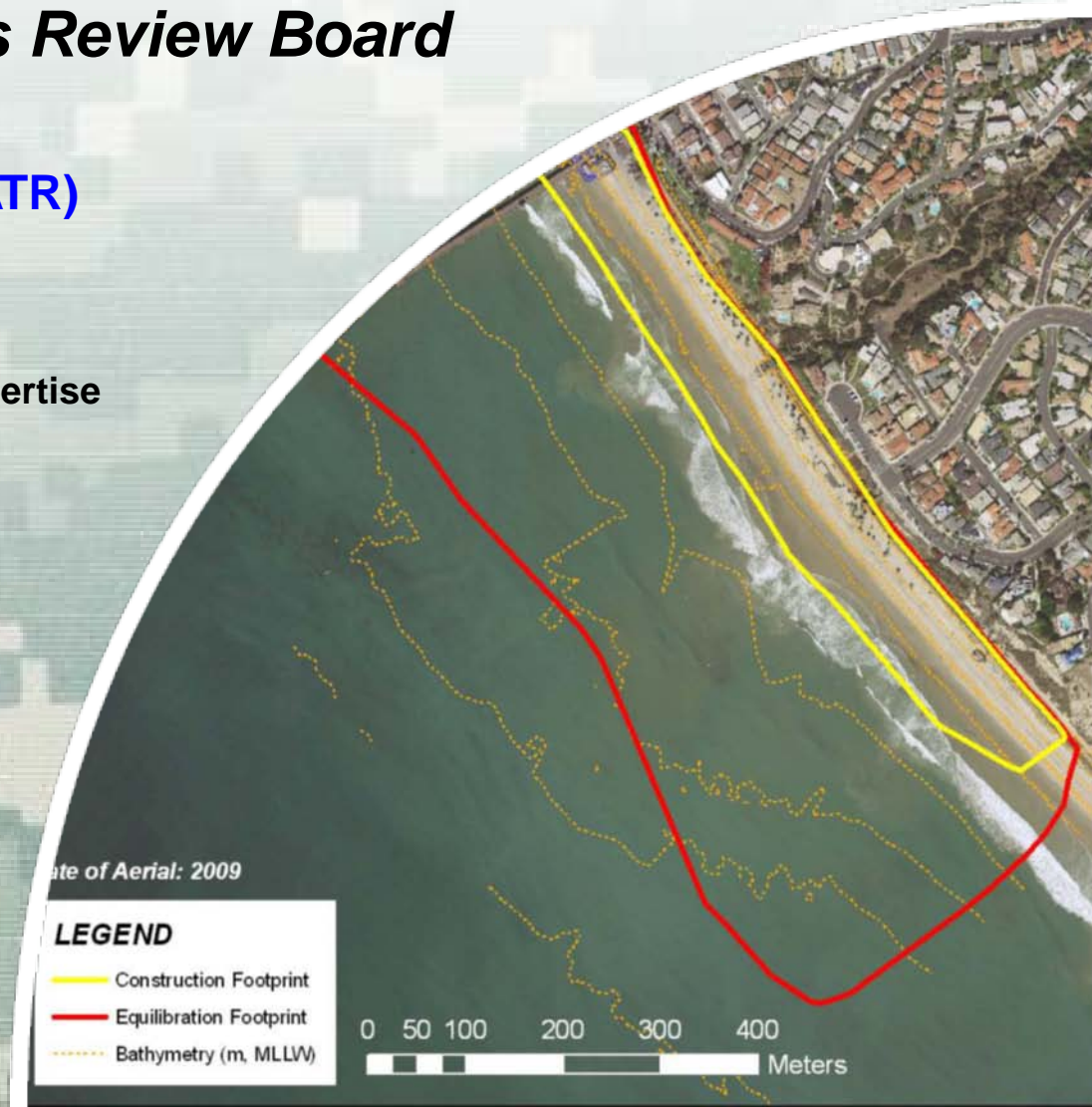
ATR Lead, National Planning Center of Expertise  
for Coastal Storm Damage Reduction

12 May 2011

Headquarters, US Army Corps of Engineers  
Washington, DC



US Army Corps of Engineers  
**BUILDING STRONG**







# ATR Team



<b>Team Member</b>	<b>ATR Role</b>	<b>US Army Corp of Engineers Office Symbol</b>	<b>Phone Number</b>
John Winkelman	ATR Lead and Coastal Engineering	CENAE-EP-WM	978-318-8615
Arden Sansom	Economics	CESPN-PM-B	415-503-6748
James Snyder	Geotechnical Engineering	CENAB-EN-GF	410-962-6817
Susan Miller	Real Estate	CESPN-PM-B	415-503-6745
Paul Zianno	Real Estate	CESPK-PM-C	916-557-6993
Thomas Pfeifer	Planning	CENAN-PL-FC	917-790-8626
Eric Jolliffe	Environmental	CESPN-ET-PA	415-503-6869
James Neubauer	Cost	CENWW-EC-X	509-527-7332

# ATR Process

- **Reviews completed for:**
  - ▶ Draft AFB Report
  - ▶ AFB Report
  - ▶ Draft Feasibility Report
  - ▶ Final Feasibility Report
- **617 comments generated during entire review process**
  - ▶ Draft Feasibility Report 55 comments
  - ▶ Final Feasibility Report 72 comments
- **Good interaction between PDT and ATR team.**
  - ▶ Team and individual phone calls
  - ▶ emails
- **All comments have been closed. Open comments that exist in Dr. Checks were moved up into the next review, addressed and closed.**

# Significant Issues – AFB Report

## ■ AFB Report:

- ▶ Presented output of the risk based alternative selection model
- ▶ Without project railroad seawall construction trigger
- ▶ Specific questions about model input and function
- ▶ Impact of the beach fill on the sub-aerial beach ecology and surfing
- ▶ Influence of the local sponsor and various groups on the alternative plan selection
- ▶ Significant inconsistencies between the various appendices and the main report
- ▶ Inconsistencies within the main report and EIS over project timing and sensitive species protection
- ▶ Overall report presentation

# Significant Issues – Feasibility Report

- **Feasibility Report (Draft and Final) were limited:**
  - ▶ Clarification of the 1% event level of erosion
  - ▶ The need for more detail regarding the risk and uncertainty model
  - ▶ The need for additional information regarding the alternative evaluation/selection
  - ▶ The Rail Road's use of seawalls
  - ▶ Reach selection criteria
  - ▶ Interest during construction
  - ▶ Amortization
  - ▶ Cost information presentation
  - ▶ Most of the comments submitted were related to formatting, report readability issues and the clarification of the report's text, figures, and tables. In particular the economics appendix was cited for needing overall editing.



# Independent External Peer Review (IEPR) – San Clemente



Battelle

Karen Johnson-Young, IEPR Program Manager

# IEPR – San Clemente

- Final IEPR Report Submitted on 7/22/10
- Comment/Response Results Documented on 10/21/2010
- Five Experts on IEPR Panel
  - **Coastal/Civil Engineer – *Christopher Creed, P.E.***
  - Civil Works Planner – *Samuel Brody*
  - Coastal Design/Construction Cost Engineer – *Michael Poff, P.E.*
  - NEPA and Biology – *Michael Josselyn*
  - Economics – *David Luckie*
- IEPR Results
  - 24 Final Panel Comments: 8 high significance, 13 medium significance; 3 low significance

# IEPR – San Clemente (continued)

- **Important Issues**

- Inconclusive data to support assertion that the San Clemente project shoreline suffers from chronic long-term net erosion
- Reliance upon regional data and non-industry standard engineering predictive methods to evaluate project performance
- Effects of material quality and variability in Borrow Area 2A on project constructability and performance
- Unaccounted for uncertainties in project costs related to equipment capacity and availability
- No specific Adaptive Management Plan

- **Comment/Response Process Results**

- USACE response to Final Panel Comments: 18 concurs, 6 non-concurs
- Panel's response to USACE: all concurs (some with comments)



# **CWRB Board Discussion and Action**





# SPL Lessons Learned

- ❖ Early coordination with Division, HQ and review teams is critical to maintaining schedule and communicating expectations.
- ❖ Nation-wide USACE collaboration
- ❖ Communicating differences in agency procedures & requirements would improve coordination
- ❖ Become quickly familiar with new requirements and develop District expertise (IEPR, Cost Estimating)



# SPD Lessons Learned

- ❖ Holistic and Collaborative Planning
- ❖ Model development required close coordination with engineering, economics and the PCX
  - West coast regional coastal engineering model needed to deal with west coast storm damage dynamics vs Beach-fx for East coast
- ❖ Vertical Teaming
  - Works great but not necessarily set-up structurally to accomplish efficiently

